



Non-Lethal Gas Apparatus to Thwart Hijacker

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Field of invention

The field of the invention is the use of non-lethal gases to incapacitate a person or persons bent upon harm to aircraft or its passengers. The system is specially useful in commercial aircraft hijack situations in which the hijacker wishes to kill or harm the pilot and take control the aircraft and passengers to attempt a kamikaze attack on a target building. Likely targets are large buildings that have a strong emotional symbolic presence.

Background of invention

From the early days the commercial aviation in the 1930's until the mid to late 1960's there were minimal restriction upon passengers and guests at airports. The passenger simply present his ticket or money for a ticket and boarded the airplane with minimal difficulty. Friends or family members who wish to see the traveler off mixed freely with passengers.

This period of minimal restriction changed. In the late 1960's a regular occurrence was that an armed passenger would hijack the aircraft, typically to Cuba. The pilot followed the wishes of the hijacker. The passengers had a long flight and delay in Cuba. While this type of hijacking was costly in terms of time and money, the passenger and airline crew were not normally harmed.

However, because of the potential danger and inconvenience of the regularly occurring hijackings, the FFA instituted a policy scanning passengers with metal detectors and instituted the policy of inspection of carry-on luggage with soft X-rays. These tactics prevented a potential hijackers from carrying unauthorized guns into the body of the aircraft. This policy coupled with the cooperation of Cuban authorities, reduced the hijackings to near zero.

This effective program to prevent Cuban hijackings was shown to be quite inadequate to prevent dedicated zealots who were prepared to sacrifice their lives as well the lives of the passengers and crew. After receiving a certain basic flying proficiency, criminals zealots could fly a fully loaded aircraft into selected targets of symbolic or financial value

At the present time, the old "rules" of hijacking are obsolete. Because there is a class of hijackers willing to learn how to fly a large commercial aircraft and glide that aircraft into a target, the current attitude toward the hijacker is, "We or they." That is any thing that will control hijackers allow a safety the pilot crew is allowed.

Brief description of figure

The Figure provides a description of the device to lessen danger to passengers in

hijacking situations in aircraft or other passenger transport. The device is a non-lethal gas apparatus.

Detailed description of figures

This figure shows volatile somnolent substance container 101. Stored within container 101 is a volatile somnolent substance 102. The release of the volatile somnolent substance 102 is controlled by valve 103. A heater 104 to optimize the volatilization of the somnolent substance 102 is placed in proximity to volatile somnolent substance container 101.

A tube 106 directs the flow of the somnolent substance in gas form 107 into the ventilator duct 109 which provides air-conditioned breathing air 110 to the passenger compartment 111.

A. monitor 113 in the passenger compartment 111 determines level of the somnolent substance 102 and maintains that level via feedback control electronics to the heater 104 and the valve 103.

The controls 115 for the activating means for the system is located a place such that only a pilot or captain can activate it. The controls 115 through the connection means 119 can activate the container valve 103 and a heater 104. Heater 104 is one means of vaporizing the somnolent substance 102. The connection means 119 between the controls 115 and the valve 103 and other components of an activation system can be either electrical or mechanical.

The somnolent substance 102 apparatus must have a security activating system 115. Such a system would have activating means which would be is a sense through security devices such as a double key device 117A, 117B. Because of the seriousness of certain actions, the certain action requires two authorized people each with a separate key simultaneously to turn the keys to activate the system thus, the "two key" system. A second of making secure the activation of the somnolent gases is a code which is processed through an alphanumeric code processing device 121. The code is known only to the pilot or other responsible person but unknown to the potential hijacker or other unauthorized persons. The authorized person can "punch in" the correct alphanumeric code to activate the system.

There are any number of somnolent gases, each with advantages and disadvantages. The final choice of would depend upon the airlines or appropriate authorities. Such a class of gases would include the following: nitrous oxide, chloroform, halothane, fluoroxene, methoxyflurane and halopropane, enflurane, isoflurane, and trichloroethylene. These are likely useful agents. However, other agents could be used within scope and intent of the present invention.

The device would have a hardened construction that would require serious tools to open it. The container 102, the valve 103, the heater, the connection 106 to the ventilation ducts 109, as well as the connection between the control 115 and a valve is to be constructed within the enclosed hardened system made of hard plastic or metal so that is essentially tamper proof. As a further measure, the somnolent substance 102 apparatus ideally should be stored within the cargo space of the aircraft.

The system can be adapted to for criminals and terrorists in any closed space such as homes and ships or other water craft as well as commercial buildings with air duct system such as banks.

Summery of invention

A device to lessen dangers to passengers in hijacking situations in aircraft or other passenger transport includes an in closed hardened system with an activating means, which is accessed through security devices. The enclosed system contain mechanical or electrical controls to activate a reservoir of volatile somnolent substance. The reservoir has a means to vaporize said volatile somnolent substance and the device release of the volatile somnolent substance into the craft's ventilating duct at a level to reduce sleepiness in the passengers and hijackers. The parts of the devices that can be so isolated is physically in the cargo space of the aircraft and thus nonassessable to unauthorized persons.

The hardened system is made of strengthened metal or reinforced plastics. A hand moved valve or an electrical or electronic activated valve will be used to release the gas. A two key system or an alphanumeric code pad process security device will be useful to activate the hijacker prevention device. Somnolent compounds may include the following nitrous oxide, chloroform, halothane, fluoroxene, methoxyflurane and halopropane, enflurane, isoflurane, and trichloroethylene. Likewise an electrical heater can be used to vaporize the volatile somnolent substance. The level of substances to induce sleepiness in the passengers and hijacker is monitored by sensor and feed back mechanism